Idaho Division of Aeronautics—Summer, 2007

Staff Development Agenda - Emphasis on Math and Science integrating with Social Studies, Language Arts and Technology

1. Introduction
2. Uses of aviation: core subjects impact, emphasis upon math and science
3. Matching of activities with Idaho state standards and ISAT
4. Imaginary flying things
5. **Technology**: use of internet and aviation URL list
6. Use motion pictures to get across academic subjects and units—show bridges at Toko-Ri excerpt with math and science questions aviation movie list
7. **Experiment on air:** cool air coming out of a balloon and temperature lapse rate problem
8. **Experiment—four forces: lift, thrust, gravity, drag**
9. Flying paper airplanes activity—4 forces: lift, thrust, gravity, and drag—Newton's laws; Bernoulli's Principle; blow on pieces of paper for lift; use mean and median formulas in flying paper airplanes and balloons
10. Construction of plotter using clear acetate and paper compass rose activity
11. Math questions involving fractional equivalents with compass rose
12. Map games with blank U.S. map and U.S. map with latitude and longitude
13. Chart symbols exercise
14. Latitude and longitude using tic-tac-toe (rubric)
15. How to find places on Montana chart excerpt
16. Websites providing airport information
17. Airport diagrams information and reading
18. Tie in with close encounters excerpt and geographic coordinates—show movie excerpt
19. Finding 2 fields for flight planning exercise— COE: 47'46 n, 116'49 w; IDA:43'30 n, 112' 04 w--completing trip plan questions with formula chart; marking checkpoints on flight log
20. **Technology**: FS Pro flight plan as basis for math problems of time, speed, distance
21. Using map scales for distances in statute and nautical miles
22. Using FS Pro flight plan with technology strand and basis for time, speed and distance problems
23. Flight plan question sheet
24. Maximum elevation figures for landforms and graphing on excel
25. **Math, social studies, reading, creative writing:** search and rescue
26. Search and rescue; enrichment activities
27. Venn diagram for search and rescue
28. Magnetic variation and geographic poles
29. Use of student e6-b computers for ground speed and wind correction angle
30. Cross country flight plan
31. Filling out AOPA flight plan from COE to IDA
32. Composition of the atmosphere with lack of oxygen at higher altitudes
33. Science: using excel for graphing effects of hypoxia and Payne Stewart
34. **Language arts, math, art**: runway construction project, Roswell with nm chart
35. Positive and negative numbers; Canon world time zone chart
36. Fuel tank storage problem—volume of cylinder problem in geometry and weights and measures on internet
37. Hangar 51 and use of new Mexico chart
38. Runway construction project